REMARKS

In the present Office Action, the Examiner has rejected the claims as being anticipated by U.S. Pat. No. 5,210,015 (Gelfand).

I) The Claims Have Previously Been Found Novel In View Of Gelfand

The Examiner has rejected the claims as being anticipated by Gelfand. Applicants note that the present claims are copied from U.S. Patent Nos. 6,110,677 and 6,121,001. The Gelfand reference was cited in those cases and the claims were allowed and issued in view of Gelfand. Thus, either the present claims are allowable in view of Gelfand or U.S. Patent Nos. 6,110,677 and 6,121,001 were issued in error and a reexamination of these patents should be initiated by the Patent Office.

Applicants previously highlighted arguments made by the owner of U.S. Patent Nos. 6,110,677 and 6,121,001. In the present Office Action, the Examiner has indicated that these arguments are not sufficient to distinguish Gelfand. For example, the owner of U.S. Patent Nos. 6,110,677 and 6,121,001 argued that Gelfand fails to teach a probe that contains a 5' non-hybridized portion as claimed. In response to this argument, the Examiner, in the present Office Action, points to Col. 13-14 and Col. 20-22 (Example V) of Gelfand which are purported to teach such a probe.

Applicants note however, the the present claims require that, upon cleavage, the generated fragments must include:

(i) a first fragment that is substantially non-hybridizable to said polynucleotide, or a first fragment including said 5' portion and no more than one nucleotide from the 5' end of said 3' portion, and

(ii) a second fragment that is 3' of said first fragment with reference to said first oligonucleotide and is substantially hybridizable to said polynucleotide

Gelfand does not teach or suggest a "probe" or cleavage method that produces the latter fragment.

The results of the experiment relied on by the Examiner are found in Figure 4--which is illegible. Therefore, the sole teachings of Gelfand are derived from the corresponding text in Example V. Example V explains that "[t]he sizes of fragments released were the same, about two and three bases in length" (Col. 21, lines 64-65) when dNTPs were absent and that "[i]n the presence of nucleoside triphosphates, the sizes of labeled probe fragments released, and the relative proportions of each, were identical for all the primers examined. Also, the sizes of products were larger by one to two bases when dNTPs were present. It may be that while the enzyme was polymerizing, it had a 'running start' and as it encountered hybridized probe, was simultaneoulys displacing one or two bases and then cutting, thus generating a larger fragment" (Col. 22, lines 4-13). Thus, Gelfand teaches that the probes are reduced to small fragments--clearly not large enough to be "substantially hybridizable to said polynucleotide". Although not anticipitory for the additional reason that the methods are non-isothermal, this is also true of the thermocycling methods of Gelfand (e.g., described in Example IV) where the probe is reduced to fragments "not stable enough to remain annealed to the template" (Col. 20, lines 58-59). Thus, Gelfand does not teach the "second fragment" of the present claims.

CONCLUSION

Applicants submit that the case is in condition for an Interference to be declared between the present application and U.S. Patents 6,110,677 and 6,121,001. If an interview would aid in the prosecution of this Application, the Examiner may call the undersigned at 608-218-6900.

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